

**List of Claims:**

**Claim 1 (currently amended):** A method for use by a first modem to ~~of establishing a~~ connection with ~~between a first modem and~~ a second modem, said method comprising:

~~connecting said first modem and~~ calling said second modem via a telephone line;

performing a ~~handshaking~~ sequence in which identification data is transmitted between said first modem and said second modem, wherein said performing said sequence comprises:

transmitting a pseudo-randomly generated code word to said second modem;

receiving a scrambled code word from said second modem, wherein said

scrambled code word is generated by scrambling said code word;

analyzing said scrambled code word; and

determining if said second modem meets a compatibility criteria based on said

analyzing ~~opening a primary data channel.~~

**Claim 2 (original):** The method of claim 1 wherein said identification data comprises information selected from the group consisting of a platform identifier, a controller revision, a DSP revision, and a firmware revision.

**Claim 3 (cancelled)**

<sup>3</sup>  
**Claim 4 (currently amended):** The method of claim 3 1 further comprising optimizing said connection based on said compatibility criteria.

<sup>4</sup>  
**Claim 5 (original):** The method of claim 1 further comprising optimizing said connection based on said identification data.

<sup>5</sup>  
**Claim 6 (currently amended):** A ~~The method of communicating from a first modem to a~~  
~~second modem~~ claim 1, wherein said sequence further comprising:

opening a primary data channel;

thereafter opening a second logical channel; and

~~using said second logical channel to transmitting~~ diagnostic/maintenance data to said  
second modem using said second logical channel.

<sup>6</sup>  
**Claim 7 (original):** The method of claim <sup>5</sup>6 wherein said diagnostic/maintenance data  
comprises customer platform identification data.

<sup>7</sup>  
**Claim 8 (original):** The method of claim <sup>5</sup>6 wherein said diagnostic/maintenance data  
comprises customer code revision identification data.

<sup>8</sup>  
**Claim 9 (original):** The method of claim <sup>5</sup>6 wherein said diagnostic/maintenance data  
comprises modem initialization data.

<sup>9</sup>  
**Claim 10 (original):** The method of claim <sup>5</sup>6 wherein said diagnostic/maintenance data  
comprises a remote query by said first modem of the responses of said second modem to AT  
commands.

<sup>10</sup>  
**Claim 11 (currently amended):** The method of claim <sup>5</sup>6 wherein said  
diagnostic/maintenance data comprises information regarding ~~the~~ a status of call waiting.

<sup>11</sup>  
**Claim 12 (original):** The method of claim <sup>5</sup>6 wherein said diagnostic/maintenance data  
comprises remote network management information.

<sup>12</sup>  
**Claim 13 (original):** The method of claim <sup>5</sup>6 wherein said diagnostic/maintenance data  
comprises system configuration data.

<sup>13</sup>  
**Claim 14 (currently amended):** The method of claim <sup>5</sup>~~6~~ wherein said ~~transferring step~~  
transmitting said diagnostic/maintenance data further comprises:

transmitting a command ~~from said first modem~~ to said second modem; and  
~~transmitting~~ receiving a response from said second modem ~~to said first modem~~ in  
response to said command.

<sup>14</sup>  
**Claim 15 (original):** The method of claim <sup>5</sup>~~6~~ wherein said diagnostic/maintenance data  
comprises firmware revision data transmitted from said first modem to said second modem.

<sup>15</sup>  
**Claim 16 (original):** The method of claim <sup>5</sup>~~6~~ wherein said diagnostic/maintenance data  
comprises uniquely generated call identification data.

<sup>16</sup>  
**Claim 17 (original):** The method of claim <sup>15</sup>~~16~~ wherein said call identification data  
comprises time information.

<sup>17</sup>  
**Claim 18 (original):** The method of claim <sup>15</sup>~~16~~ where in said call identification data  
comprises information regarding the types of modems being connected.

<sup>15</sup>  
**Claim 18 (original):** The method of claim <sup>15</sup>~~16~~ where in said call identification data  
comprises information regarding which telephone line is being used.


<sup>19</sup>  
**Claim 20 (original):** The method of claim <sup>5</sup>~~6~~ wherein said second logical channel is used  
simultaneously with said primary data channel.

<sup>20</sup>  
**Claim 21 (original):** The method of claim <sup>19</sup>~~20~~ further comprising:  
analyzing said primary data channel and said second logical channel for usage; and  
prioritizing said primary data channel if both said primary data channel and said second  
logical channel are simultaneously used.

<sup>21</sup>  
**Claim 22 (currently amended):** The method of claim <sup>5</sup>~~6~~ further comprising transmitting said identification data on said second logical channel.

<sup>22</sup>  
**Claim 23 (original):** The method of claim <sup>5</sup>~~6~~ wherein the diagnostic/maintenance data is used to optimize the connection of the first modem and the second modem.

<sup>23</sup>  
**Claim 24 (currently amended):** The method of claim <sup>5</sup>~~6~~ further comprising sending AT commands ~~from the first modem~~ to the second modem on the second logical channel; and sending receiving a response to said AT commands from said second modem ~~to said first modem~~.

<sup>24</sup>  
**Claim 25 (currently amended):** The method of claim <sup>5</sup>~~6~~ further comprising sending receiving AT commands from the second modem ~~to the first modem~~ on the second logical channel; and

sending transmitting a response to said AT commands ~~from said first modem to said second modem~~.

<sup>25</sup>  
**Claim 26 (currently amended):** The method of claim <sup>5</sup>~~6~~ wherein said diagnostic/maintenance data comprises a remote query ~~by said first modem of the~~ to responses of said second modem to diagnostic query commands.

<sup>26</sup>  
**Claim 27 (currently amended):** The method of claim <sup>5</sup>~~6~~ wherein said diagnostic/maintenance data comprises a random or pseudo-random number which indexes into a database uniquely or pseudo-uniquely identifying ~~the generated~~ call conditions.

<sup>27</sup>  
**Claim 28 (currently amended):** The method of claim <sup>5</sup>~~6~~ further comprising: sending a query command ~~from the first modem~~ to the second modem on said second logical channel; and

~~sending~~ receiving a response to said query commands from said second modem ~~to said~~  
~~first modem.~~

<sup>28</sup>  
**Claim 29 (currently amended):** The method of claim <sup>5</sup>~~6~~ further comprising:

~~sending~~ receiving a query command from the second ~~modem to the first modem~~ on said  
second logical channel; and

~~sending~~ transmitting a response to said query commands ~~from said first modem~~ to said  
second modem.

<sup>24</sup>  
**Claim 30 (currently amended):** A modem identification method of ~~identifying a~~ for use  
by a first modem, said method comprising:

placing a call by said first modem to a ~~remote device~~ second modem;

entering a physical handshaking process;

transmitting a first modem manufacturer parameter ~~by said modem~~ to said ~~remote~~  
~~device~~ second modem during said physical handshaking process, wherein said first modem  
manufacture parameter identifies said first modem;

receiving a second modem manufacturer parameter from said second modem  
during said physical handshaking process, wherein said second modem manufacture parameter  
identifies said second modem; and

completing said physical handshaking process to establish a data communication  
session ~~between said modem and~~ with said ~~remote device~~ second modem.

<sup>30</sup>  
**Claim 31 (currently amended):** The method of claim <sup>24</sup>~~30~~, wherein said first modem  
manufacturer parameter is a DSP revision of said first modem.

<sup>31</sup>  
**Claim 32 (currently amended):** The method of claim <sup>29</sup>30, wherein said first modem manufacturer parameter is a firmware revision of said first modem.

<sup>32</sup>  
**Claim 33 (currently amended):** The method of claim <sup>30</sup>30, wherein said first modem manufacturer parameter is transmitted as part of V.8.

<sup>33</sup>  
**Claim 34 (currently amended):** A modem identification method ~~of identifying a~~ for use by a first modem, said first modem being in communication with a host, said method comprising:

placing a call by said first modem to a ~~remote device~~ second modem;

completing a physical handshaking process to establish a data communication session ~~between said modem and~~ with said ~~remote device~~ second modem;

establishing an error correction process ~~between said modem and~~ with said ~~remote device~~ second modem, said error correction process having a primary channel, for exchanging data between said host and said ~~remote device~~ second modem, and a secondary channel;

transmitting a first modem manufacturer parameter ~~by said modem to said remote device~~ second modem via said secondary channel, wherein said first modem manufacture parameter identifies said first modem;

receiving a second modem manufacturer parameter from said second modem via said secondary channel, wherein said second modem manufacture parameter identifies said second modem.

<sup>34</sup>  
**Claim 35 (currently amended):** The method of claim <sup>33</sup>34, wherein said first modem manufacturer parameter is a DSP revision of said first modem.

<sup>35</sup>  
**Claim 36 (currently amended):** The method of claim <sup>33</sup>34, wherein said first modem manufacturer parameter is a firmware revision of said first modem.

<sup>26</sup>  
**Claim 37 (previously presented):** The method of claim <sup>33</sup>34, wherein said error correction process is based on V.42 Recommendation.

<sup>37</sup>  
**Claim 38 (currently amended):** A method of authenticating an identification process for use by a first modem in communication with a ~~remote device~~ second modem, said method comprising:

receiving a random code by said first modem from said ~~remote device~~ second modem;

*Bl Cont.* scrambling said random code, in accordance with a predetermined scrambling process, to generate a scrambled code; and

sending said scrambled code to said ~~remote device~~ second modem to confirm compatibility;

receiving a second modem manufacturer parameter from said second modem in response to said sending said scrambled code; and

transmitting a first modem manufacturer parameter to said second modem.

**Claim 39 (cancelled)**

<sup>37</sup>  
**Claim <sup>38</sup>40 (previously presented):** The method of claim <sup>38</sup>39, wherein said transmitting occurs during a physical handshaking process.

<sup>37</sup>  
**Claim <sup>38</sup>41 (previously presented):** The method of claim <sup>38</sup>39, wherein said transmitting occurs after a physical handshaking process.

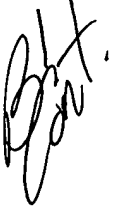
<sup>40</sup>  
**Claim <sup>38</sup>42 (currently amended):** The method of claim <sup>38</sup>39, wherein said first modem manufacturer parameter is a firmware revision of said first modem.

<sup>41</sup>  
**Claim 43 (currently amended):** The method of claim <sup>37</sup>~~39~~, wherein said first modem manufacturer parameter is a DSP revision of said first modem. <sup>37</sup>

<sup>42</sup>  
**Claim 44 (previously presented):** The method of claim <sup>38</sup>~~39~~, wherein said transmitting occurs during an error correction process based on V.42 Recommendation.

<sup>43</sup>  
**Claim 45 (currently amended):** A first modem capable of ~~providing~~ exchanging identification data with a second modem, said first modem comprising:

a call module capable of placing a call to a remote device;

 a handshaking module capable of entering a physical handshaking process with said ~~remote device~~ second modem; and

a transmitter capable of transmitting a first modem manufacturer parameter to said ~~remote device~~ second modem during said physical handshaking process;

a receiver capable of receiving a second modem manufacturer parameter from said second modem during said physical handshaking process;

wherein, after said transmitter transmits said first modem manufacturer parameter to said ~~remote device~~ second modem and said receiver receives said second modem manufacturer parameter from said second modem, said handshaking module completes said physical handshaking process to establish a data communication session ~~between~~ with said ~~remote device~~ second modem.

<sup>44</sup>  
**Claim 46 (currently amended):** The modem of claim <sup>43</sup>~~45~~, wherein said first modem manufacturer parameter is a DSP revision of said first modem.

<sup>45</sup>  
**Claim 47 (currently amended):** The modem of claim <sup>43</sup>~~45~~, wherein said first modem manufacturer parameter is a firmware revision of said first modem.



*46*  
**Claim ~~48~~ (currently amended):** The modem of claim *43* ~~45~~, wherein said first modem  
manufacturer parameter is transmitted as part of V.8.

---